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Patent Application
Serial No. 09/522,808
Docket No. MRI-100

THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner	:	Tiffany A. Fetzner
Art Unit	:	2859
Applicants(s)	:	David A. Molyneaux, G. Randy Duensing, S. Uli Gotshal, Thomas E. Schubert, Alan Holland and Scott B. King
Serial No.	:	09/522,808
Filed	:	March 10, 2000
For	:	Method and Apparatus for NMR Imaging

Commissioner for Patents
P.O. Box 1450
Alexandria, Virgina 22313-1450

DECLARATION UNDER 37 CFR §131

Sir:

I, David A. Molyneaux, G. Randy Duensing, S. Uli Gotshal, Thomas E. Schubert, Alan Holland and Scott B. King hereby declare:

THAT, we are the applicants of the above-identified application and inventors of the subject matter described and claimed therein.

THAT, prior to September 30, 1999, we had completed and tested (see Exhibit B) in this country our invention as described and claimed in the above-identified application, filed March 10, 2000, as evidenced by the following:

1. Prior to September 30, 1999, we conceived of the invention as evidenced by an excerpt from a laboratory notebook, attached herewith as Exhibit A. The date, which is prior to September 30, 1999, has been redacted in the excerpt from the laboratory notebook of attached Exhibit A.

2. Prior to September 30, 1999, we reduced the invention to practice as

evidenced by an excerpt from a laboratory notebook, attached herewith as Exhibit B, which documents results with respect to measurements conducted with the invention. The date, which is prior to September 30, 1999, has been reacted in the excerpt from the laboratory notebook of attached Exhibit B.

The undersigned declare further that all statements made herein of our own knowledge are true and that all statements made on information in belief are believed to be true; and further that these statements were made with the knowledge that willful false statements in the like so made are punishable by fine or imprisonment, or both, under 1001 of title 18 of the U.S.C. and that such willful false statements made jeopardize the validity of the application or of any patent issuing thereon, or mutant of the claimed sequence.

Further declarants sayeth naught.

David A. Molyneaux — July 6, 2004
Date executed

G. Randy Duensing — July 6, 2004
Date executed

S. Uli Gotshal — Date executed

Thomas E. Schubert — Date executed

Alan Holland — July 7th, 2004
Date executed

Scott B. King — Date executed

evidenced by an excerpt from a laboratory notebook, attached herewith as Exhibit B, which documents results with respect to measurements conducted with the invention. The date, which is prior to September 30, 1999, has been reacted in the excerpt from the laboratory notebook of attached Exhibit B.

The undersigned declare further that all statements made herein of our own knowledge are true and that all statements made on information in belief are believed to be true; and further that these statements were made with the knowledge that willful false statements in the like so made are punishable by fine or imprisonment, or both, under 1001 of title 18 of the U.S.C. and that such willful false statements made jeopardize the validity of the application or of any patent issuing thereon, or mutant of the claimed sequence.

Further declarants sayeth naught.

David A. Molyneaux	Date executed
G. Randy Duensing	Date executed
S. Uli Gotshal	July 8, 2004 Date executed
Thomas E. Schubert	Date executed
Alan Holland	Date executed
Scott B. King	Date executed

evidenced by an excerpt from a laboratory notebook, attached herewith as Exhibit B, which documents results with respect to measurements conducted with the invention. The date, which is prior to September 30, 1999, has been redacted in the excerpt from the laboratory notebook of attached Exhibit B.

The undersigned declare further that all statements made herein of our own knowledge are true and that all statements made on information in belief are believed to be true; and further that these statements were made with the knowledge that willful false statements in the like so made are punishable by fine or imprisonment, or both, under 1001 of title 18 of the U.S.C. and that such willful false statements made jeopardize the validity of the application or of any patent issuing thereon, or mutant of the claimed sequence.

Further declarants sayeth naught.

David A. Molyneaux	Date executed
G. Randy Duensing	Date executed
S. Uli Gotshal	Date executed
Thomas E. Schubert	July 6, 2004
Alan Holland	Date executed
Scott B. King	Date executed

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The undersigned declare further that all statements made herein of our own knowledge are true and that all statements made on information in belief are believed to be true; and further that these statements were made with the knowledge that willful false statements in the like so made are punishable by fine or imprisonment, or both, under 1001 of title 18 of the U.S.C. and that such willful false statements made jeopardize the validity of the application or of any patent issuing thereon, or contract of the claimed acquisite.

Further declarants sayeth naught.

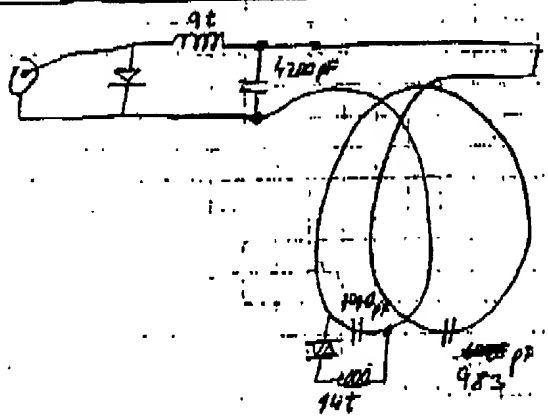
David A. Molyneaux	Date executed
G. Randy Duensing	Date executed
S. Ui Gotshal	Date executed
Thomas E. Schubert	Date executed
Alan Holland	Date executed
Scott B. King	July 12 2004 Date executed

EXHIBIT A

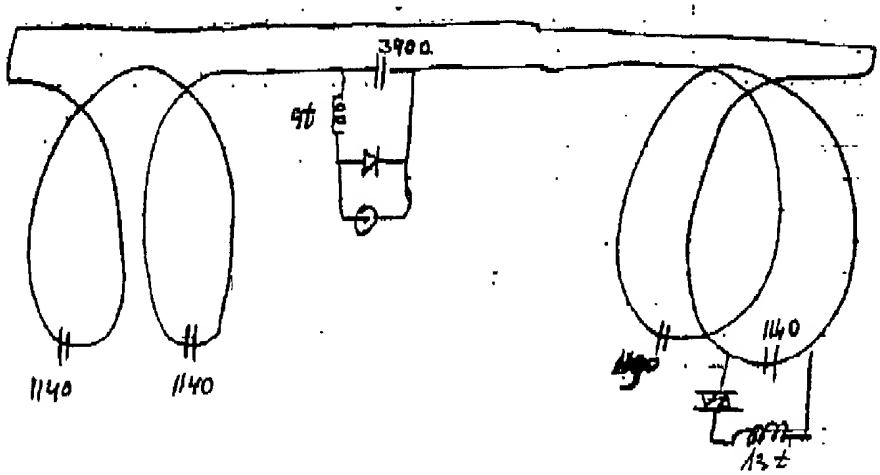
Final Results - Profile HRW

Final Configuration:

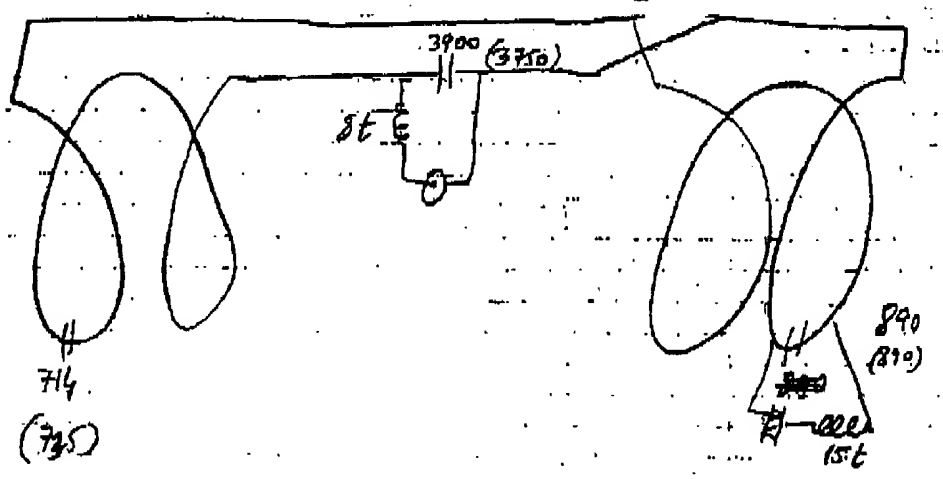
Center Solenoid:



Counter Rotating Solenoid:



Helmholtz - pairs.



(in parenthesis: values for lower pairs).

EXHIBIT B

Profile coil system tests

1. large shoulder – all 4 elements Ok.
2. small shoe – " "
3. wrist – " "
4. breast – elements 3,4 – noisy.

SNR Measurments –

Nominal wrist coil : (12 turns solenoid, 3-turn wire)

$$SNR = \frac{950}{3.14} \cong 300$$

Same coil connected to ch1 of PA :

$$SNR = \frac{5384}{23.4} \cong 230$$

Same at ch2:

$$SNR \cong 247$$

same with diffrent scaling factos

" with 3db attenuator

With YMS Pre-Amp- same SNR